cuneatus Distant. The smooth character of the scutellum may be merely a variation or race characteristic of the eastern form, but with such a difference present it seems best to use a varietal name rather than make the mistake of recording a Mexican species from the eastern United States, a form which eventually might prove distinct when biological studies are made.

Neocapsus cuneatus var. **leviscutatus** new variety.

Length 5.5-5.9 mm.; the larger specimen with pronotum 2.5 mm. wide at base and 1.34 mm. in length. Very similar to *cuneatus* Distant, but the scutellum entirely smooth; shining black, pronotum and scutellum orange red, but with subbasal margin of pronotal disk, calli, and anteriorly, except collar, more or less black; front of head reddish, but with black appearing on tylus and just above base of antennae.

Described from a male, May 7, 1915, Agricultural College, Mississippi (G. F. Arnold); author's collection. Two females, June 20, Linville Falls, North Carolina, alt. 4000 ft. (F. Sherman).

The genus *Neocapsus* Distant is very similar to *Horcias* Distant, and, in fact, will prove hard to separate in a key, although the shallowly and sparsely punctate pronotal disk of the former can be pointed out as different from the nearly smooth disk of the latter. In *cuneatus* Distant the pronotum appears shorter and broader, also the head is noticeably shorter than in *Horcias dislocatus* (Say).

Coleoptera of the Pacific Coast, Notes and Criticisms.

By Frank E. Blaisdell, San Francisco, California.

Omus reynoldsi Casey, Memoirs, XI, 1924, p. 5.

This form of *Omus cuprconitens* B. & R. has recently been described and based upon a single male specimen, which, on account of its narrow form and subcuneate elytra, suggested the grade of subspecies. Coleopterists of the Pacific Coast are well aware that a certain per cent. of the males of several specis of *Omus* have the elytra gradually narrowing to base and the humeri obsolete. The form under discussion was considered by Mr. Reynolds and myself in our description of the

species (Ent. News, XXVIII, pp. 49-55, Feb., 1917), and a careful perusal of the paper will be elucidative. A selected series of fifty specimens of *cupreonitens* is before me, and in it are seen all intergradations between the males with subangulate and those with obsolete humeri. Small males are found in all species that I have ever collected. Some one hundred and fifty specimens of *cupreonitens* were collected from a small area at the type locality as stated with the description of the species. Many specimens were distinctly coppery in the sunlight when first collected, and all were distinctly shining, hence the name *cupreo-nitens* (coppery-shining), the color ranging from coppery to deep black. *Reynoldsi* is an absolute synonym. It is a form (forma). A *form* is not a taxonomic grade, but a group of individuals of a species, subspecies or variety as limited, selected because they vary in the same way as regards color, sculpturing, size and shape.

Omus blaisdelli Casey, Can. Ent. Vol. XLI, p. 260, Aug., 1909.

The forms described as *ovipennis* and *torvus* by Col. Casey (Memoirs, VII, 1916, p. 14; XI, 1924, p. 11) are absolutely synonymous with *blaisdelli* Casey. They were collected by Mr. Beverly Letcher and myself. The variations of *blaisdelli* were discussed by Mr. Reynolds and myself in our paper on *cupreonitens*. A selected series of thirty-five specimens are before me, showing large, robust females, less robust males and the *ovipennis* and *torvus* forms, as well as intermediates.

Cicindela latisignata Lec.

In Zoe, Vol. III, No. 1, April, 1892, p. 47, the writer published a short paper on the Cicindelidae found in San Diego County, California, in which was discussed the variation in maculation observed in *latisignata*. On one or two occasions in the author's early papers vexatious mistakes were made; they arose from the fact that a number of species had been wrongly identified. As a result of such a determination the narrower marked form of *latisignata* was recorded as *tenuicincta*. The specimens with very broad and confluent elytral markings have quite recently been named *obliviosa* by Col.

Casey. In the writer's boyhood days much time was spent on the ocean and bay beaches about San Diego, with an unlimited opportunity—in those pioneer days—to observe the actions and relations of the several species of *Cicindela* inhabiting the San Diego region.

The results of these studies were included in the paper referred to above. In a large series of *latisignata* at hand all intergradations connecting the narrower and broader marked specimens can be studied. It is very obvious that *obliviosa* Casey is nothing more than a mere form of *latisignata,* and therefore an absolute synonym.

Another and analogous case may be mentioned at the present time—that of *apricoidea* Casey (Memoirs, IV, 1913, p. 32), an immaculate form of *saulcyi.* The author's series of *saulcyi* and *apricoidea* is a complete refutation of even the grade of variety. Specimens of *saulcyi* have been seen which show the normal markings on one elytron and the other immaculate. If an elytron be removed from a specimen of *apricoidea* and held up to the light, the pattern of maculation normal to *saulcyi* can usually be discerned. The pattern simply did not come to the surface during the closing moments of the ontogenesis of the insect. Such a condition may be sporadic in some localities, while in others a larger number of individuals are affected.

The time is not far distant when the status of these forms will be better understood, and as not due to changes in germ plasm, but to environmental or ecological conditions. Check-lists should not be encumbered with the names of forms. These should be left for consideration in current papers or monographs and to their proper recognition in collections. It is not too much to say that most of the maculate species of *Cicindela* have occasional or sporadic immaculate individuals: Note *dorsalis, saulcyi, hemorrhagica, sierra,* etc., and the collection of a series in the region which they inhabit will give all of the intermediate gradations between the maculate and immaculate forms.

Cicindela pacifica Schaupp.

San Diego is the type region for this subspecies of *hemorrhagica.* I have taken it abundantly on the ocean beach at Del

Mar, San Diego County, California. In that locality *pacifica* was not intermixed with *hemorrhagica* (1881). The specimens collected were deep bluish-olive with a sericeous luster and all immaculate, although when an elytron was held up to the light the maculation was more or less discernible. It should be noted that Schaupp (Syn. Cicindelidae of the U. S. of N. Amer., Bul. Brooklyn Ent Soc., Vol. VI, p. 106) states that *pacifica* "occurs intermingled with the type equally numerous on the ocean shore of San Diego, California." My fine series was destroyed by the great earthquake of 1906. Another series has been acquired, but it is not quite the same thing, and at the end of the series the specimens lead to *bisignata* Dokh. and on into *hemorrhagica*. I cannot make up my mind that it is the same as the Del Mar subspecies. At any rate, I consider the true *pacifica* as a valid subspecies. It must, however, be differentiated from the sporadic immaculate form of *hemorrhagica* which occurs wherever the type species is found, be it on the ocean or bay beach, in an alfalfa field, in an interior valley or on the streets of a city. These sporadic immaculate individuals of *hemorrhagica* are not common. They never occur in numbers in any one locality, as do *pacifica* and *bisignata*.

Bembidion suspectum Blais. Proc. Acad. Nat. Sci. Philad., 1902, p. 76, Feb.

Col. Casey in his Memoirs, XI, p. 40, states that this species is identical with and a synonym of *indistinctum* Dej. This opinion is based on a specimen which I sent to him. *Suspectum* is a distinct species as far as *indistinctum* is concerned, and I would be very much aggrieved if I thought that I sent him a specimen of *indistinctum*.

The latter species is one of the most common species of *Bembidion* in the middle coast regions of California, as determined by the late Mr. Hayward and Dr. Van Dyke. In every specimen of my long series of *indistinctum* the microscopical sculpturing of the elytral and pronotal surfaces consists of an extremely fine reticulation; the specimens had not been previously separated by this character. In *suspectum* the sculpturing consists of very fine transverse lines. This form

of sculpturing is seen in the specimens referred to *coloradense* Hayw., where it is constantly present. *Suspectum* belongs to the *dentellum* group rather than to the *indistinctum* section. In fact, it has been suggested that it is not distinct from *dentellum* Thunb.—again I am on the defensive. The latter, according to Col. Casey, does not occur in the United States. The type of *suspectum* came from Oregon, and the species is distributed as far south as San Francisco.

Listrus montanus Casey.

This species was very kindly identified for me by Col. Casey. My original specimens consisted of a pair. A recent examination of the male showed that the third joint of one antenna had a distinct spinule near the apical border, as in the male of *maculosus* Casey. A closer study showed that my series of *montanus* consisted entirely of large and small females and that my series of *maculosus* were all males. The species occurs on willows chiefly, and is quite widely distributed. *Maculosus* is therefore the male of *montanus* and falls into synonymy.

Eulabis crassicornis Casey. VII. Coleopterol. Notices II, 1890, p. 404.

A specimen, supposedly of this species, was given to me by Col. Casey several years ago. It was collected on Catalina Island, the type locality. Upon examination I found numerous stubs of hairs on the declivous sides and apical area of the elytra. *Crassicornis* is described as glabrous and devoid of elytral pubescence. I have since received other and similar specimens from the Island, and everyone has given distinct evidence of abundance of hairs on the elytra. The species is said to be smaller than *laticornis* Casey; the specimens are also smaller than the average specimens of *pubescens* Lec., with which *crassicornis* is identical, and therefore synonymous. Similar specimens occur on the mainland.

Eulabis montanus Casey. Memoirs, XI, 1924, p. 330.

This species has recently been described and defined as "larger and with relatively narrower hind body than *rufipes*." It is based on a single specimen from Eldorado County, California. *Rufipes* has a wide range of distribution, and, besides,

is very variable in size; smallest in the extreme southern part of the State (San Diego County), largest about San Francisco and on the western slopes of the Sierra Nevada Mountains. In a very long series—more than a hundred specimens—the largest specimens taken in the Sierras are no larger than the largest taken about San Francisco.

The males of *rufipes* are all relatively narrower in the hind body, and the pronotum is as wide as or slightly wider than the elytra; these characters are most noticeable in individuals above the average size. The mentum is carinate in the median line, and the crest of the carina is flattened anteriorly and sometimes with a very feeble oval depression. The females are relatively shorter and broader in the hind body, and the carina of the mentum is subacute at the crest. In the male the secondary sexual characters are well marked, the surface of the abdomen being less convex and impressed along the median line.

I see no reason why *montanus* should be considered even as a race, as similar specimens occur about San Francisco. There are all intermediates between the extremes, both in Central and Southern California. *Montanus* is simply a form as defined above under *Omus reynoldsi*.

The following distribution of *rufipes* is taken from my large series: Measurements (extremes).—Length, 4.5 mm. (Poway, San Diego County); 7.5 mm. (San Francisco); 8 mm. (Tuolumne County).

San Diego and Poway, San Diego County, July. San Francisco, October 21, 1906; June 14 and September 20, 1908. Santa Cruz County, June, 1896. Marina, September 14; Pacific Grove, September 6, 1920, Monterey County. Sunol, Alameda County, May 14, 1922. Dipsea, Marin County, June 8. Mokelumne Hill, Calaveras County, June 26, 1921; Davis Meadow, June, 1903. North Fork, Madera County, March 14, 1920, 7000 feet elevation. Tuolumne County, May 15, 1914. Specimens in Dr. Van Dyke's collection were collected in Eldorado County.

Eleodes snowi Blais. Bull. 63, U. S. Nat. Mus., 1909, p. 317.

Fall and Cockerell in the list of the Coleoptera of New

Mexico (Trans. Am. Ent. Soc., XXXIII, June, 1907) express the belief that *lecontei* and *snowi* are one and the same species. It must be admitted that there was some doubt as to the relation of these two species. A single specimen of typical *lecontei* was received from Mr. Frederick Blanchard at the time that the Monograph on the Eleodiini was under way, and it was very carefully compared with specimens of *snowi* from New Mexico and Arizona. I decided that they were not the same species. The solution of the question depended on acquiring a series of *lecontei*. This was accomplished some four or five years ago. Mr. Alfred Champlain while resident in Colorado sent me a series from El Paso County of that State, which proved to be identical with the Blanchard specimen. These specimens verified my opinion regarding the specific standing of *lecontei* and *snowi*. *Lecontei* is much more depressed dorsally and asperately sculptured than *snowi*.

Odonata Notes From North Carolina.

Enallagma pictum Morse. On June 4, 1921, while at Fayetteville, I observed a number of Enallagmas flying about the banks of a small stream, late in the afternoon. A number of these were captured and one proved to be a male of this species. The others were *E. exsulans* and *E. signatum*. Two days later I went to the same place in the middle of the day but only found a single *exsulans*.

Coryphaeschna ingens Rambur. A large nymph taken at Williamston, October 23, 1924. The lateral stripes extend forward on the sides to above the bases of the middle pair of legs and there is a dark stripe on the sides of the head back of the eyes. The labium is very long, extending backward between the hind coxae nearly to their apices. Length 55 mm. The specimen is exactly like Kennedy's figure *(Entomological News,* XXX, 106, April, 1919).

Nasiaeschna pentacantha Rambur. A nymph taken at Williamston, in the same piece of water as the *Coryphaeschna* nymph but two days earlier, October 21, 1924, was wholly black in color, its dark coloration and short labium strongly contrasting with the light colors and long labium of the bigger species. Length 42 mm.

C. S. Brimley, Ent. Div., N. C. Dept. Agr., Raleigh, N. C.